

Amendment to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1 and 2 (Previously cancelled)

Claim 3 (Currently amended): A surface-modified, pyrogenically produced oxides doped by aerosol, characterized in that the oxides are selected from the group consisting of SiO_2 , Al_2O_3 , TiO_2 , B_2O_3 , ZrO_2 , In_2O_3 , ZnO , Fe_2O_3 , Nb_2O_5 , V_2O_5 , WO_3 , SnO_2 and GeO_2 , wherein the surface is modified to impart to the surface a sufficient hydrophobic character which permits rapid dissolution in organic systems at high concentrations with one or several compounds selected from the following groups:

a) Organosilanes having either formula $(\text{RO})_3\text{Si}(\text{C}_n\text{H}_{2n+1})$ or $(\text{RO})_3\text{Si}(\text{C}_n\text{H}_{2n-1})$, wherein

R = alkyl, and

n = 1 – 20;

b) Organosilanes having either formula $\text{R}'_x (\text{RO})_y \text{Si}(\text{C}_n\text{H}_{2n+1})$ or $(\text{RO})_3\text{Si}(\text{C}_n\text{H}_{2n+1})$,

wherein

R = alkyl,

R' = alkyl,

R' = cycloalkyl

n = 1 – 20,

$$x+y = 3,$$

$x = 1$, or 2 , and

$y = 1$, or 2 ;

c) Halogen organosilanes having either formula $X_3 \text{ Si}(\text{C}_n\text{H}_{2n+1})$ or $X_3 \text{ Si}(\text{C}_n\text{H}_{2n-1})$,

wherein

$X = \text{Cl}$, or Br , and

$n = 1 - 20$;

d) Halogen organosilanes having either formula $X_2 (\text{R}') \text{ Si}(\text{C}_n\text{H}_{2n+1})$ or

$X_2 (\text{R}') \text{ Si}(\text{C}_n\text{H}_{2n-1})$, wherein

$X = \text{Cl}$, or Br

$\text{R}' = \text{alkyl}$ ~~and~~ or cycloalkyl, and

$n = 1 - 20$;

e) Halogen organosilanes having formula $X (\text{R}')_2 \text{ Si}(\text{C}_n\text{H}_{2n+1})$ or

$X (\text{R}')_2 \text{ Si}(\text{C}_n\text{H}_{2n-1})$, wherein

$X = \text{Cl}$, or Br ;

$\text{R}' = \text{alkyl}$ or ~~and~~ cycloalkyl, and

$n = 1 - 20$;

f) Organosilanes having the formula $(\text{RO})_3\text{Si}(\text{CH}_2)_m\text{-R}'$

R = alkyl,

m = 0, or 1-20, and

R' = methyl-, aryl-, -C₆H₅, substituted phenyl groups,

-C₄F₉, OCF₂-CHF-CF₃, -C₆F₁₃, -O-CF₂-CHF₂,

-NH₂, =N₃, -SCN, -CH=CH₂, -NH-CH₂-CH₂-NH₂,

-N-(CH₂-CH₂-CH₂NH₂)₂,

-OOC(CH₃)C=CH₂,

-OCH₂-CH(O)CH₂,

-NH-CO-N-CO-(CH₂)₅,

-NH-COO-CH₃, -NH-COO-CH₂-CH₃, -NH-(CH₂)₃Si(OR)₃,

-SH, or

-NR'R''R''', wherein R' = alkyl, or aryl; R'' = H, alkyl, aryl; and R''' = H, alkyl, aryl,

benzyl, or C₂H₄N(R''''')₂, wherein R'''' = H, or alkyl;

g) Organosilanes having the formula (R'')_x (RO)_y Si(CH₂)_m-R', wherein

R'' = alkyl, or cycloalkyl,

x+y = 2,

x = 1, or 2,

y = 1, or 2,

m = 0, or 1 to 20, and

R' = methyl-, aryl-, -C₆H₅, substituted phenyl groups,

-C₄F₉, -OCF₂-CHF-CF₃, -C₆F₁₃, -O-CF₂-CHF₂,

$-\text{NH}_2$, $-\text{N}_3$, SCN , $-\text{CH}=\text{CH}_2$, $-\text{NH}-\text{CH}_2-\text{CH}_2-\text{NH}_2$,
 $-\text{N}-(\text{CH}_2-\text{CH}_2-\text{NH}_2)_2$,
 $-\text{OOC}(\text{CH}_3)\text{C}=\text{CH}_2$,
 $-\text{OCH}_2-\text{CH}(\text{O})\text{CH}_2$,
 $-\text{NH}-\text{CO}-\text{N}-\text{CO}-(\text{CH}_2)_5$,
 $-\text{NH}-\text{COO}-\text{CH}_3$, $-\text{NH}-\text{COO}-\text{CH}_2-\text{CH}_3$, $-\text{NH}-(\text{CH}_2)_3\text{Si}(\text{OR})_3$,
 or $-\text{SH}$, or
 $-\text{NR}'\text{R}''\text{R}'''$, wherein $\text{R}' = \text{alkyl}$, or aryl ; $\text{R}'' = \text{H}$,
 alkyl , or aryl ; and $\text{R}''' = \text{H}$, alkyl , aryl , benzyl , or
 $\text{C}_2\text{H}_4\text{N}(\text{R}'''')_2$, wherein $\text{R}'''' = \text{H}$, or alkyl ;

h) Halogen organosilanes having the formula $\text{X}_3\text{Si}(\text{CH}_2)_m\text{R}'$, wherein

$\text{X} = \text{Cl}$, or Br ,

$m = 0, 1 - 20$,

$\text{R}' = \text{methyl-}$, aryl , $-\text{C}_6\text{H}_5$, substituted phenyl groups

$-\text{C}_4\text{F}_9$, $-\text{OCF}_2-\text{CHF}-\text{CF}_3$, $-\text{C}_6\text{F}_{13}$, $-\text{O}-\text{CF}_2-\text{CHF}_2$,
 $-\text{NH}_2$, $-\text{N}_3$, SCN , $-\text{CH}=\text{CH}_2$, $-\text{NH}-\text{CH}_2-\text{CH}_2-\text{NH}_2$,
 $-\text{N}-(\text{CH}_2-\text{CH}_2-\text{NH}_2)_2$,
 $-\text{OOC}(\text{CH}_3)\text{C}=\text{CH}_2$,
 $-\text{OCH}_2-\text{CH}(\text{O})\text{CH}_2$,
 $-\text{NH}-\text{CO}-\text{N}-\text{CO}-(\text{CH}_2)_5$,
 $-\text{NH}-\text{COO}-\text{CH}_3$, $-\text{NH}-\text{COO}-\text{CH}_2-\text{CH}_3$, $-\text{NH}-(\text{CH}_2)_3\text{Si}(\text{OR})_3$, or

-SH;

i) Halogen organosilanes having the formula $(R)X_2Si(CH_2)_m-R'$, wherein

$X = Cl, \text{ or } Br,$

$R = \text{alkyl such as methyl-, ethyl-, or propyl-},$

$m = 0, \text{ or } 1 - 20, \text{ and}$

$R' = \text{methyl-, aryl-, } -C_6H_5, \text{ substituted phenyl groups},$

$-C_4F_9, -OCF_2-CHF-CF_3, -C_6F_{13}, -O-CF_2-CHF_2,$

$-NH_2, -N_3, SCN, -CH=CH_2, -NH-CH_2-CH_2-NH_2,$

$-N-(CH_2-CH_2-NH_2)_2,$

$-OOC(CH_3)C=CH_2,$

$-OCH_2-CH(O)CH_2,$

$-NH-CO-N-CO-(CH_2)_5,$

$-NH-COO-CH_3, -NH-COO-CH_2-CH_3,$

$-NH-(CH_2)_3Si(OR)_3, \text{ or}$

-SH;

(j) Halogen organosilanes having the formula $(R)_2XSi(CH_2)_m-R'$, wherein

$X = Cl, \text{ or } Br,$

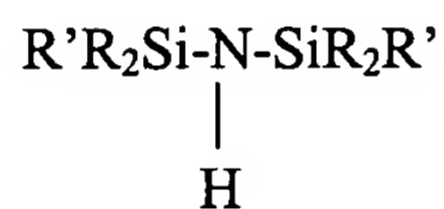
$R = \text{alkyl},$

$m = 0, \text{ or } 1 - 20, \text{ and}$

$R' = \text{methyl-, aryl-, } -C_6H_5, \text{ substituted phenyl groups},$

$-\text{C}_4\text{F}_9$, $-\text{OCF}_2\text{-CHF-CF}_3$, $-\text{C}_6\text{F}_{13}$, $-\text{O-CF}_2\text{-CHF}_2$,
 $-\text{NH}_2$, $-\text{N}_3$, SCN , $-\text{CH=CH}_2$, $-\text{NH-CH}_2\text{-CH}_2\text{-NH}_2$,
 $-\text{N-(CH}_2\text{-CH}_2\text{-NH}_2)_2$,
 $-\text{OOC (CH}_3\text{)C = CH}_2$,
 $-\text{OCH}_2\text{-CH(O) CH}_2$,
 $-\text{NH-CO-N-CO-(CH}_2\text{)}_5$,
 $-\text{NH-COO-CH}_3$, $-\text{NH-COO-CH}_2\text{-CH}_3$, $-\text{NH-(CH}_2\text{)}_3\text{Si(OR)}_3$, or
 $-\text{SH}$;

(k) Silazanes having the formula

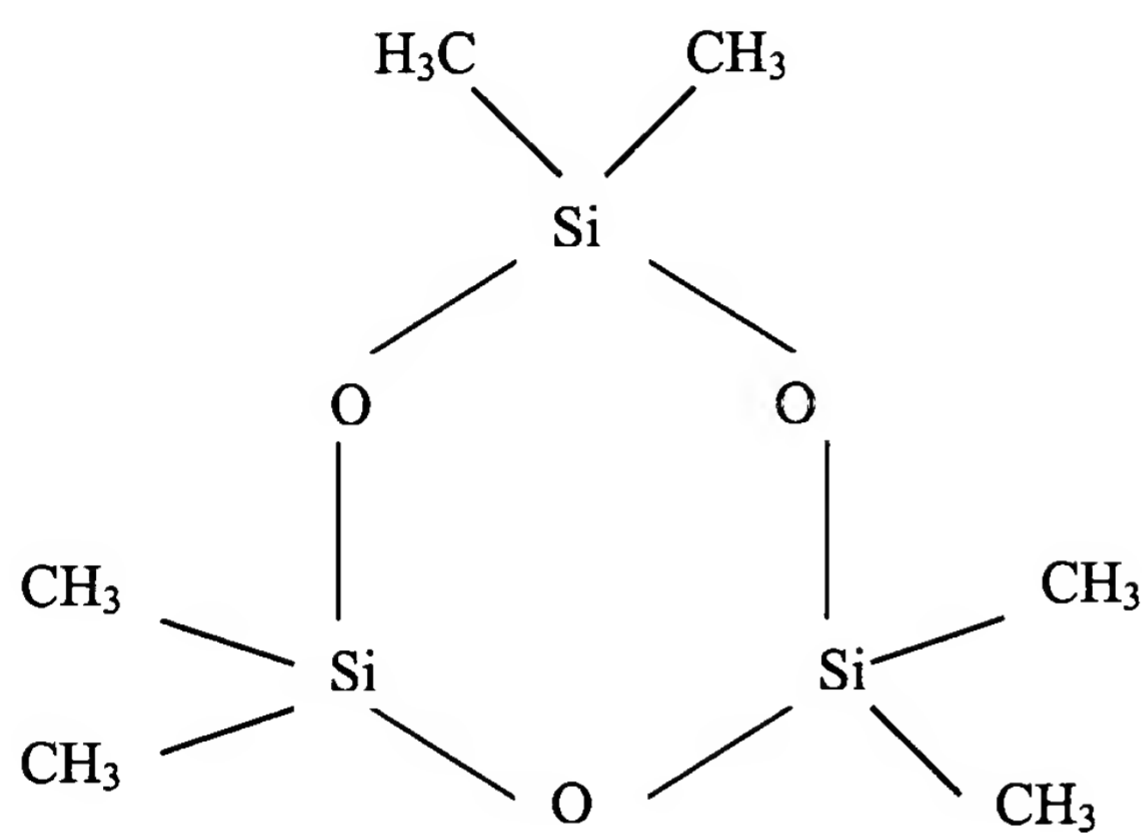


wherein R = alkyl, and

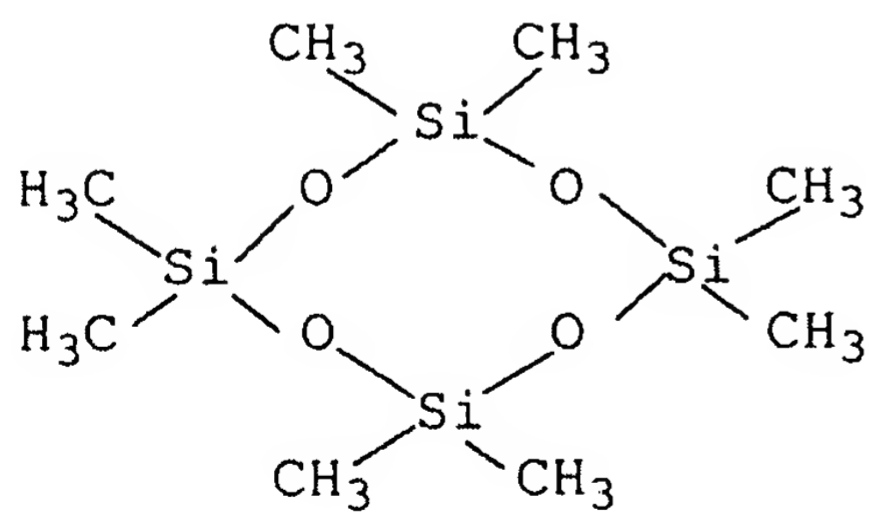
R' = alkyl, or vinyl; or

(l) Cyclic polysiloxanes D 3, D 4 or D 5,

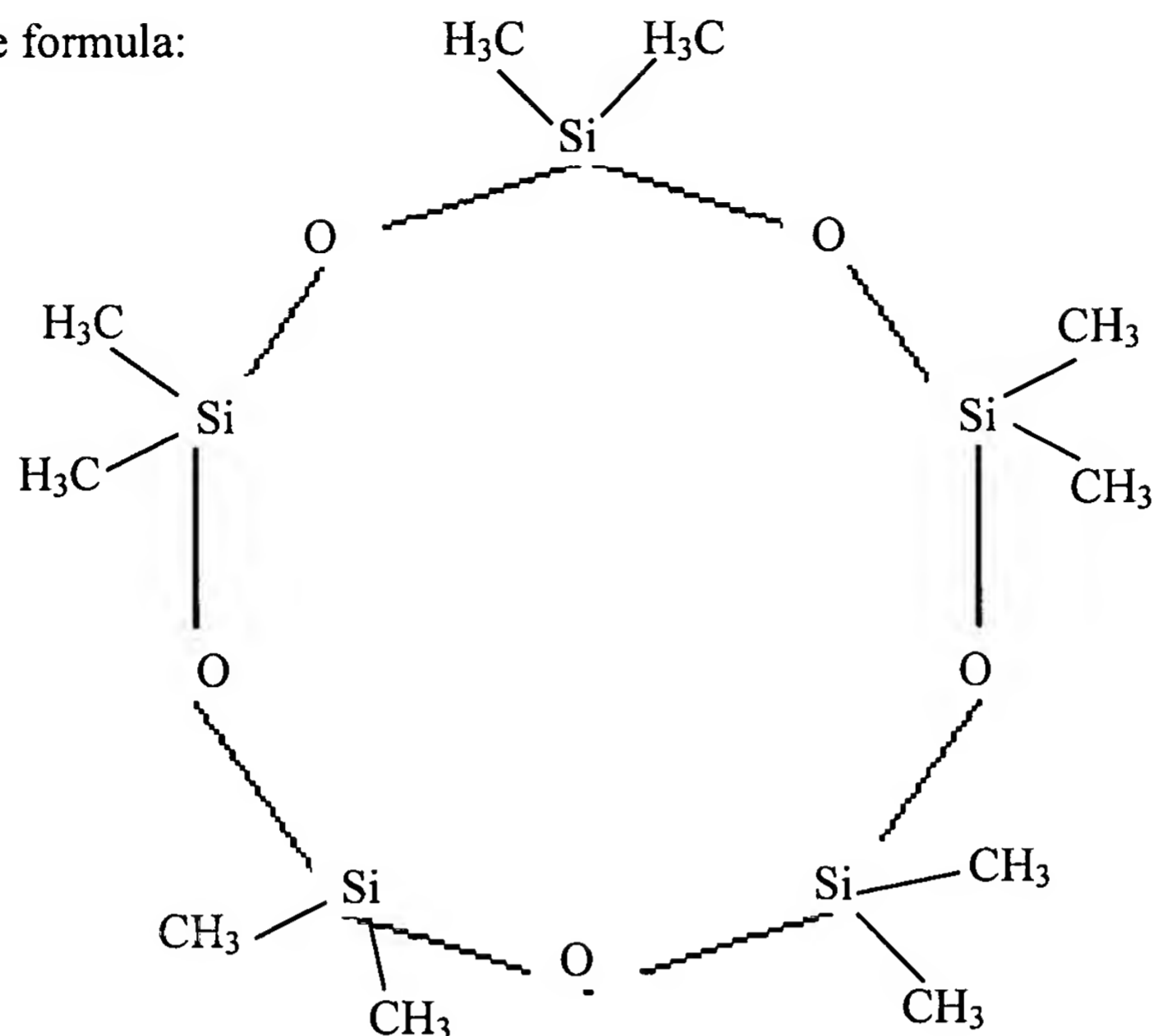
where 1) D3 has the formula:



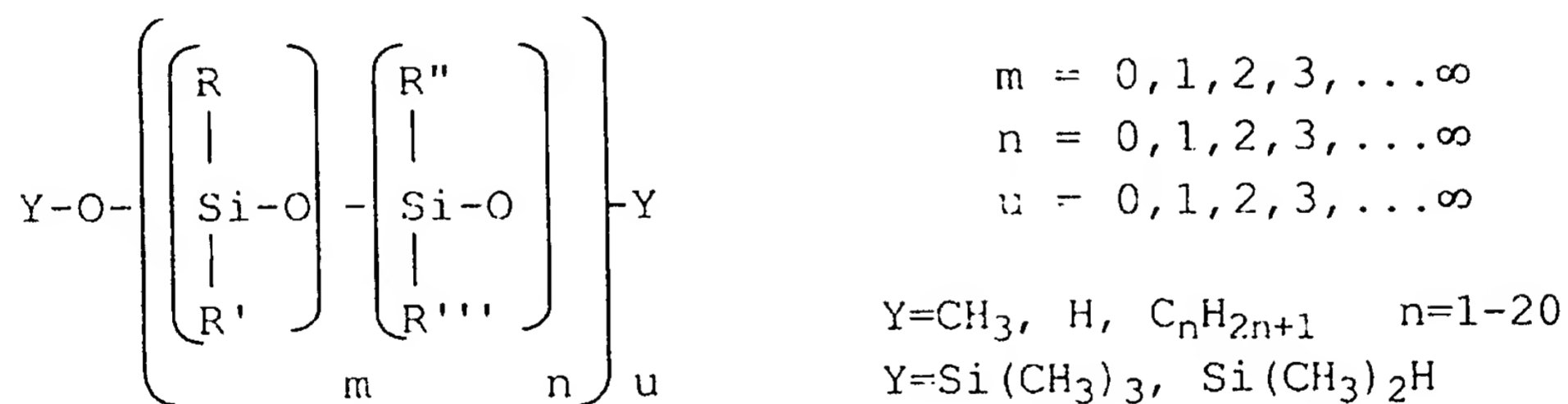
2) D4 has the formula:



and 3) D5 has the formula:



m) Polysiloxanes or silicone oils having any one of the formula



, $Si(CH_3)_2OH$, $Si(CH_3)_2(OCH_3)$, or

$Si(CH_3)_2(C_nH_{2n+1})$, wherein $n=1-20$,

wherein,

$R = \text{alkyl, aryl, } (CH_2)_n-NH_2, \text{ or } H,$

$R' = \text{alkyl, aryl, } (CH_2)_n-NH_2, \text{ or } H,$

$R'' = \text{alkyl, aryl, } (CH_2)_n\text{-NH}_2, \text{ or H,}$

$R''' = \text{alkyl, aryl, } (CH_2)_n\text{-NH}_2, \text{ or H.}$

Claim 4 (Previously presented): A method of producing the surface-modified oxides in accordance with claim 3, comprising placing pyrogenically produced oxides doped by aerosol in a suitable mixing container, spraying the oxides under intensive mixing with the surface-modification reagent or a mixture of several surface-modification reagents.

Claim 5 (Previously presented): In a reinforcing filler composition wherein the improvement comprises the surface-modified oxides according to claim 3 as reinforcing filler.

Claim 6 (Original) The method of claim 4 wherein the spraying step includes spraying with water and/or acid prior to the spraying with the surface-modification reagent or a mixture of several surface-modification reagents.

Claim 7 (Original) The method of claim 4 further comprising re-mixing at 15 to 30 minutes and tempering at a temperature of 100 to 400 °C for a period of 1 to 6 hours.

Claim 8 (Previously presented) The surface-modified, pyrogenically produced oxides according to claim 3 wherein the cyclic polysiloxanes is D 4.

Claim 9 (Cancelled)